



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350**

DATE : February 27, 2012
SUBJECT: Region III Data QA Review
FROM: Colleen Walling
Region III ESAT RPO (3EA20)
TO: Rich Fetzer
Remedial Project Manager (3HS31)

Attached is the organic data validation report for the Dimock Residential Groundwater site (DAS:# R33917; SDG: #5057872) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2763.

Attachment

TO: #0042 TDF: 02115 Data Validation
TO: #0042 TDF: #02085 Sample log-in processing

cc: Gene Nance (Techlaw)
Suddha Graves (Techlaw)

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE

**Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474**

Lockheed Martin IS&GS – Civil
Energy & Environment
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

DATE: February 27, 2012

SUBJECT: Organic Data Validation (Level M3)
Site: Dimock
CASE: R33917, PROJECT: 5057872

FROM: [REDACTED] *AW*
Senior Data Reviewer
[REDACTED] *M*
Senior Oversight Chemist

TO: Colleen Walling
ESAT Region 3 Project Officer

OVERVIEW

Case R33917, Project 5057872, from the Dimock site consisted of eight (8) aqueous samples including one (1) field blank and one (1) rinsate blank analyzed for ethylene glycol. All samples were submitted to Pace Analytical Services Incorporated (PACE). The samples were analyzed according to Test Methods for Evaluating Solid Waste SW-846 Method 8015B.

SUMMARY

Data were validated according to Region 3 Modifications to the National Functional Guidelines for Organic Data Review, Level M3 and is assigned the Superfund Data Validation Label S4VM (Stage_4_Validation_Manual). No problems were detected during validation of these data.

NOTES

- No positive results were reported in the field samples in this data set. Therefore, no confirmation analyses were required.
- Samples EB01 and FB06 were assumed to be the rinsate and field blanks, respectively. The laboratory used sample EB01 for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses.
- Reported recoveries and Relative Percent Differences (RPDs) in the Laboratory Control Sample (LCS) analysis and MS/MSD analyses of sample EB01 were within control limits.

- The laboratory stated in the case narrative that method 8015B was used in the analyses of these samples. However, method 8015C is referenced as the method used for the analyses in the raw data. No action was taken by the reviewer based on this finding.

ATTACHMENTS

- 1) Appendix A - Glossary of Data Qualifiers
- 2) Appendix B - Data Summary Forms
- 3) Appendix C - Chain of Custody (COC) Records
- 4) Appendix D - Laboratory Case Narrative

DCN: R33917_Project 5057872DimockM3

Appendix A

Glossary of Data Qualifiers

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: Volatiles

Page 1 of 1

Case #: R33917

Project : 5057872

Site :

DIMOCK

Lab. :

PACE

Number of Water Samples : 8

Sample Number :		EB01		FB06		HW13		HW18		HW18-P	
Sample Station Location:		EB01		FB06		HW13		HW18		HW18	
Laboratory ID :		5057872001		5057872002		5057872003		5057872004		5057872005	
Field QC :		Rinsate Blank		Field Blank							
Matrix :		Water		Water		Water		Water		Water	
Units :		mg/L		mg/L		mg/L		mg/L		mg/L	
Date Sampled :		1/28/2012		1/30/2012		1/30/2012		1/30/2012		1/30/2012	
Time Sampled :		11:26		09:30		11:23		11:27		11:52	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Volatile Compound	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Ethylene glycol	10										

Sample Number :		HW20		HW20-P		HW25-P					
Sample Station Location:		HW20		HW20		HW25					
Laboratory ID :		5057872006		5057872007		5057872008					
Field QC :											
Matrix :		Water		Water		Water					
Units :		mg/L		mg/L		mg/L					
Date Sampled :		1/30/2012		1/30/2012		1/30/2012					
Time Sampled :		16:12		16:29		15:32					
Dilution Factor :		1.0		1.0		1.0					
Volatile Compound	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Ethylene glycol	10										

Appendix C

Chain of Custody (COC) Records

USEPA CLP Generic COC (LAB COPY)

Date Shipped: 1/31/2012

Carrier Name: FedEx

Airbill No: 7980 0495 6181

CHAIN OF CUSTODY RECORD

CASE R33917

Case Complete: False

5057872

No: 3-013112-110607-0039

Lab: PACE Analytical DIM

Lab Contact: [REDACTED]

Lab Phone: 317.875.5894

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
EB01	Aqueous/ Tom Sedlacek	Grab	EthyGlycol(7), EthyGlycol(7)	881 (-NA- / 40mlGlassVial), 882 (-NA- / 40mlGlassVial) (2)	EB01	01/28/2012 11:26	-001
FB06	Aqueous/ Dan Jacobsen	Grab	EthyGlycol(7), EthyGlycol(7)	1127 (-NA- / 40mlGlassVial), 1128 (-NA- / 40mlGlassVial) (2)	FB06	01/30/2012 09:30	-002
HW13	Drinking Water/ Bryan Bema	Grab	EthyGlycol(7), EthyGlycol(7)	1164 (-NA- / 40mlGlassVial), 1165 (-NA- / 40mlGlassVial) (2)	HW13	01/30/2012 11:23	-003
HW18	Drinking Water/ Mike Ferrier	Grab	EthyGlycol(7), EthyGlycol(7)	1200 (-NA- / 40mlGlassVial), 1201 (-NA- / 40mlGlassVial) (2)	HW18	01/30/2012 11:27	-004
HW18-P	Drinking Water/ David Johnson	Grab	EthyGlycol(7), EthyGlycol(7)	1236 (-NA- / 40mlGlassVial), 1237 (-NA- / 40mlGlassVial) (2)	HW18	01/30/2012 11:52	-005
HW20	Drinking Water/ Mike Ferrier	Grab	EthyGlycol(7), EthyGlycol(7)	1348 (-NA- / 40mlGlassVial), 1349 (-NA- / 40mlGlassVial) (2)	HW20	01/30/2012 16:12	-006
HW20-P	Drinking Water/ David Johnson	Grab	EthyGlycol(7), EthyGlycol(7)	1313 (-NA- / 40mlGlassVial), 1314 (-NA- / 40mlGlassVial) (2)	HW20	01/30/2012 16:29	-007
HW25-P	Drinking Water/ Bryan Bema	Grab	EthyGlycol(7), EthyGlycol(7)	1283 (-NA- / 40mlGlassVial), 2096 (-NA- / 40mlGlassVial) (2)	HW25	01/30/2012 15:32	-008

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: EthyGlycol=17-Ethylene Glycol

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
16	Paul Bly	1/31/12	[REDACTED]	2-1-11	0759						

WFI 3-2-6x
798004956181

Appendix D

Laboratory Case Narrative



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

February 20, 2012

Gene Nance
TechLaw, Inc.
2208 Warwood Ave
Wheeling, WV 26003

RE: Project: R33917
Pace Project No.: 5057872_Revised report_Updated Method Blank analysis time.

Dear Gene Nance:

Enclosed are the analytical results for sample(s) received by the laboratory on February 01, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

[Redacted Signature]

[Redacted Name]

[Redacted Title]

Project Manager

Enclosures

cc: Fred Foreman, EPA
Suddha Graves, TechLaw, Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 1 of 15

Page 1 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

SAMPLE SUMMARY

Project: R33917
Pace Project No.: 5057872

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5057872001	EB01	Water	01/28/12 11:26	02/01/12 07:59
5057872002	FB06	Water	01/30/12 09:30	02/01/12 07:59
5057872003	HW13	Water	01/30/12 11:23	02/01/12 07:59
5057872004	HW18	Water	01/30/12 11:27	02/01/12 07:59
5057872005	HW18-P	Water	01/30/12 11:52	02/01/12 07:59
5057872006	HW20	Water	01/30/12 16:12	02/01/12 07:59
5057872007	HW20-P	Water	01/30/12 16:29	02/01/12 07:59
5057872008	HW25-P	Water	01/30/12 15:32	02/01/12 07:59

REPORT OF LABORATORY ANALYSIS

Page 3 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 3 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5884

QUALIFIERS

Project: R33917
Pace Project No.: 5057872

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ATTACHMENT 2

Appendix A

Form Is



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: EB01		Lab ID: 5057872001		Collected: 01/28/12 11:26		Received: 02/01/12 07:59		Matrix: Water		
Parameters		Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols		Analytical Method: EPA 8015B Modified								
Ethylene glycol		ND	mg/L	10.0	5.0	1		02/02/12 16:20	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 5 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 5 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: FB06		Lab ID: 5057872002		Collected: 01/30/12 09:30		Received: 02/01/12 07:59		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols									
Analytical Method: EPA 8015B Modified									
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:25	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 6 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 6 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: HW13		Lab ID: 5057872003	Collected: 01/30/12 11:23	Received: 02/01/12 07:59	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols		Analytical Method: EPA 8015B Modified							
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:30	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 7 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 7 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: HW18		Lab ID: 5057872004	Collected: 01/30/12 11:27	Received: 02/01/12 07:59	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols		Analytical Method: EPA 8015B Modified							
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:35	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 8 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 8 of 71



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917

Pace Project No.: 5057872

Sample: HW18-P		Lab ID: 5057872005		Collected: 01/30/12 11:52		Received: 02/01/12 07:59		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols		Analytical Method: EPA 8015B Modified							
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:40	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 9 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Page 9 of 71

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: HW20		Lab ID: 5057872006		Collected: 01/30/12 16:12		Received: 02/01/12 07:59		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols									
Analytical Method: EPA 8015B Modified									
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:45	107-21-1	



Pace Analytical Services, Inc.
1233 Dublin Road
Columbus, OH 43215
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: HW20-P		Lab ID: 5057872007	Collected: 01/30/12 16:29	Received: 02/01/12 07:59	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols		Analytical Method: EPA 8015B Modified							
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:50	107-21-1	

Date: 02/20/2012 02:56 PM

REPORT OF LABORATORY ANALYSIS

Page 11 of 15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 11 of 71

ANALYTICAL RESULTS

Project: R33917
Pace Project No.: 5057872

Sample: HW25-P		Lab ID: 5057872008		Collected: 01/30/12 15:32		Received: 02/01/12 07:59		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols									
Analytical Method: EPA 8015B Modified									
Ethylene glycol	ND	mg/L	10.0	5.0	1		02/02/12 16:55	107-21-1	

Appendix B

Support Documentation

QUALITY CONTROL DATA

Project: R33917
Pace Project No.: 5057872

QC Batch: GCSV/8845 Analysis Method: EPA 8015B Modified
QC Batch Method: EPA 8015B Modified Analysis Description: EPA 8015 Modified
Associated Lab Samples: 5057872001, 5057872002, 5057872003, 5057872004, 5057872005, 5057872006, 5057872007, 5057872008

METHOD BLANK: 681420 Matrix: Water
Associated Lab Samples: 5057872001, 5057872002, 5057872003, 5057872004, 5057872005, 5057872006, 5057872007, 5057872008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylene glycol	mg/L	ND	10.0	02/02/12 15:33	

LABORATORY CONTROL SAMPLE: 681421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylene glycol	mg/L	250	279	112	78-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 681422 681423

Parameter	Units	5057872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Ethylene glycol	mg/L	ND	250	250	242	211	96	83	51-135	14	20

Report Date : 10-Feb-2012 10:09

Page 1

Pace Analytical Services, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-FEB-2012 14:57
End Cal Date : 02-FEB-2012 15:23
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\192.168.50.6\chem\50GCS2.i\020212A\081110dsp.m
Last Edit : 03-Feb-2012 08:59 rkercheval

Calibration File Names:

Level 1: \\192.168.50.6\chem\50GCS2.i\020212A\003f0301.d
Level 2: \\192.168.50.6\chem\50GCS2.i\020212A\004f0301.d
Level 3: \\192.168.50.6\chem\50GCS2.i\020212A\005f0301.d
Level 4: \\192.168.50.6\chem\50GCS2.i\020212A\006f0301.d
Level 5: \\192.168.50.6\chem\50GCS2.i\020212A\007f0301.d
Level 6: \\192.168.50.6\chem\50GCS2.i\020212A\008f0301.d

Compound	5.0000	25.0000	50.0000	125.0000	250.0000	500.0000	Curve	Coefficients			%RSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
1 Propylene glycol	887	1063	967	892	890	1137	AVRG		973		10.86288
2 Ethylene glycol	802	789	643	668	675	742	AVRG		720		9.35179

Page 22 of 71

Pace Analytical Service, Inc.

Alcohol Analysis by SW846 8015C FID

Data file : \\192.168.50.6\chem\50GCS2.i\020212A\009f0301.d
Lab Smp Id: ICV 14732
Inj Date : 02-FEB-2012 15:28
Operator : CEM
Smp Info : ICV 14732
Misc Info :
Comment : Alcohol Analysis by SW846 8015C FID
Method : \\192.168.50.6\chem\50GCS2.i\020212A\081110dsp.m
Meth Date : 02-Feb-2012 15:42 RKercheval Quant Type: ESTD
Cal Date : 02-FEB-2012 15:23 Cal File: 008f0301.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 4.14
Processing Host: 50-VOA-RAK

Inst ID: 50GCS2.i

Compound Sublist: all.sub

Compounds					CONCENTRATIONS	
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/L)
1 Propylene glycol	1.936	1.937	-0.001	271018	278.659	278.65
2 Ethylene glycol	2.066	2.067	-0.001	207418	288.178	288.17

Good
CEM
2.10.12